

--ABSTRACT OF THE DISCLOSURE

A rotating electric machine of a type with rotating field circuit, intended for direct connection to a distribution or transmission network. At least one electric winding of the machine includes at least one electric conductor, a first layer with semiconducting properties surrounding the conductor, a solid insulating layer surrounding the first layer, and a second layer with semiconducting properties surrounding the insulating layer. A detecting circuit is also arranged to detect earth faults in the rotating field circuit. Methods of monitoring the resistance of the field winding to earth and of determining the rotor temperature in such a machine is also described.--